

# METHODS AND APPARATUS FOR REMOVING CONDUCTIVE MATERIAL FROM A MICROELECTRONIC SUBSTRATE

## ABSTRACT

A method and apparatus for removing conductive material from a microelectronic substrate is disclosed. One method includes disposing an electrolytic liquid between a conductive material of a substrate and at least one electrode, with the electrolytic liquid having about 80% water or less. The substrate can be contacted with a polishing pad material, and the conductive material can be electrically coupled to a source of varying electrical signals via the electrolytic liquid and the electrode. The method can further include applying a varying electrical signal to the conductive material, moving at least one of the polishing pad material and the substrate relative to the other, and removing at least a portion of the conductive material while the electrolytic liquid is adjacent to the conductive material. By limiting/controlling the amount of water in the electrolytic liquid, an embodiment of the method can remove the conductive material with a reduced downforce.